

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance. The present amendment is being made to facilitate prosecution of the application.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1-13 and 21-46 are currently pending. Claims 1, 8-10, 12, 13, 21, 28-30, 32-34, 41-43, 45 and 46, which are independent, are hereby amended. No new matter has been introduced. Support for this amendment is provided throughout the Specification as originally filed, and specifically at pages 19-23, and Figures 9A, 9B, 12-14, and 17.

Changes to the claims are not made for the purpose of patentability within the meaning of 35 U.S.C. §101, §102, §103, or §112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

II. REJECTIONS UNDER 35 U.S.C. §103(a)

Claims 1-8, 10-12, 21-28, 30-32, 34-41, and 43-45 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,583,653 to Timmermans (hereinafter, merely "Timmermans") in view of U.S. Patent No. 5,691,819 to Uchida et al. (hereinafter, merely "Uchida"). Claims 9, 13, 29, 33, 42, and 46 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Timmermans and Uchida in view of *Official Notice*.

Independent claims 1, 8, 9, 10 and 12-13, 21, 28-30, 32-34, 41-43 and 46, have been amended. Accordingly, Applicants respectfully traverse these rejections.

A. Claims 1-13

1. UCHIDA AND TIMMERMANS DO NOT
TEACH OR SUGGEST EACH AND
EVERY ELEMENT RECITED IN THE CLAIMS

Independent claim 1 is representative and recites, *inter alia*:

“An information recording apparatus for recording information on a predetermined recording medium . . .

wherein said creation means creates first data by which an image can be displayed over an entire screen, and second data for enhancing the image quality of said image displayed by said first data, each being used as said search data, and said recording means records said first data sequentially followed on the recording medium by said second data,

wherein the first data includes a first macro block of discrete cosine components extracted from a first luminance signal, a second macro block of discrete cosine components extracted from a first color-difference signal, and a third macro block of discrete cosine components extracted from a second color-difference signal, and

wherein the second data includes three macro blocks of discrete cosine components extracted from each of three luminance signals, the three luminance signals and the first luminance signal are portions of a main luminance signal.”
(Emphasis added)

Applicants respectfully submit that nothing has been found in Timmermans or Uchida that would teach or suggest the above-identified features of claim 1.

First, neither Timmermans nor Uchida, taken alone or in combination, teach or suggest that the first data is sequentially followed on the recording medium by the second data, as required by claim 1.

Second, claim 1 recites a specific ordering of the macro blocks in the first and second data. The first data is composed of a first macro block of discrete cosine components extracted from a first luminance signal [Y0], a second macro block of discrete cosine components extracted from a first color-difference signal [Cb = R-Y], and a third macro block of discrete

cosine components extracted from a second color-difference signal $[Cr = B - Y]$, and the second data is composed of three macro blocks of discrete cosine components extracted from each of three luminance signals $[Y1, Y2, \text{ and } Y3]$, as recited in claim 1. That is, the first data is macro blocks $\{Y0, Cb, Cr\}$ and the second data is macro blocks $\{Y1, Y2, Y3\}$. In contrast, Uchida and Timmermans arrange the macro blocks in the “traditional” way as discussed below,

Thus, claim 1 requires, *inter alia*:

- (1) the first data includes the specific macro blocks $\{Y0, Cb, Cr\}$;
- (2) the second data includes the specific macro blocks $\{Y1, Y2, Y3\}$; and
- (3) the first data is recorded on the record medium and sequentially followed by the second data.

The Office Action appears to rely on Uchida (Figs. 3A; 3B; 10; Col. 5, lines 1-21; and Col. 8, lines 35-48) for a teaching of the three above-identified features. However, as clearly shown in Figs. 3B and 10, and taught in Col. 8, lines 35-48, Uchida orders the first data and the second data in the “traditional” way, that is: $Y0, Y1, Y2, Y3, Cb (R - Y)$, followed by $Cr (B - Y)$. The *priority* that Uchida refers to at Column 8, lines 38-41, as correctly stated in the Office Action on page 4, lines 6-8, refers to the priority within the macro blocks, not the ordering of the macro blocks, as required by claim 1. Thus, Uchida teaches priority of the low frequency components over the high frequency components within the macro blocks, but explicitly teaches the “traditional” ordering of the macro blocks.

Thus, claim 1 is patentable over the Uchida and Timmermans references for at least requiring the ordering of macro blocks of first data $[Y0, Cb (R - Y), Cr (B - Y)]$, sequentially followed on the recording medium by macro blocks of second data $[Y1, Y2, Y3]$, which is not suggested by the references.

The specific ordering of macro blocks in the first data and the second data and the sequence claimed in the present invention has an advantage that “an entire display screen can be roughly displayed when some of the search data is lost due to tag recording and/or editing, ... and also when an error occurs during reading.” (See page 1, lines 14-18 of the Specification). That is, “although a case is described in which some of the search image data is erased due to tag recording, ... and also when search image data does not become available for one screen as a result of an error occurring during reading, by applying the present invention, it is possible to prevent, by using the obtained search image data when some of the data is lost, a screen from appearing unnatural when viewed by a user.” (See page 27, 2nd paragraph of the Specification).

2. NO MOTIVATION TO COMBINE THE
UCHIDA AND TIMMERMANS REFERENCES

The Office Action has failed to provide a motivation or suggestion to combine the teachings of Uchida with the teachings of Timmermans. The closest argument to a motivation can be found on page 4, lines 11-13, where the Office Action states “... it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Timmermans by including generating coded data technique in order to store a main component of the coded data.” However, in spite of that motivation not being a valid technical motivation for combining the reference teachings, that motivation is not found in Timmermans, Uchida, or within the knowledge of one of ordinary skill. Rather, it seems to be impermissibly gleaned from Applicants’ own disclosure.

Therefore, Applicants respectfully submit that independent claim 1 is patentable over Timmermans and Uchida.

For reasons similar, or somewhat similar, to those described above with regard to independent claim 1, independent claims 8, 9, 10 and 12-13 are also patentable.

B. Claims 21-33

Independent claim 21 is representative and recites, *inter alia*:

“An information recording apparatus for recording information on a predetermined recording medium . . .

wherein said creation means creates first data by which an image can be displayed over an entire screen, and second data for enhancing the image quality of said image displayed by said first data, each being used as said search data, and said recording means records said **first data sequentially followed on the recording medium by said second data**,

wherein **the search data for nine traces of the recording medium are arranged across 144 tracks separated into four traces of first data sequentially followed on the recording medium by five traces of second data**,

wherein the first data includes a first macro block of discrete cosine components are extracted from a first luminance signal, a second macro block of discrete cosine components are extracted from a first color-difference signal, and a third macro block of discrete cosine components are extracted from a second color-difference signal, and

wherein the second data includes three macro blocks of discrete cosine components extracted from each of three luminance signals, wherein the three luminance signals and the first luminance signal are portions of a main luminance signal.”

(Emphasis added)

Applicants respectfully submit that nothing has been found in Timmermans or Uchida that would teach or suggest the above-identified features of claim 21. In addition to the features previously identified and argued above for independent claim 1, neither Timmermans nor Uchida, taken alone or in combination, teach or suggest that **the search data for nine traces of the recording medium are arranged across 144 tracks separated into four traces of first data sequentially followed on the recording medium by five traces of second data**, as required by claim 21.

The Office Action appears to suggest that the organization of the search data is a matter of design choice. However, that is simply not true. The organization of the search data, such that first data is sequentially followed on the record medium by second data, is a novel aspect of the claimed invention, as previously described. The Office Action has failed to provide a *prima facie* rejection of independent claim 21 by failing to cite appropriate portions of Uchida for the above-identified claim limitation.

Therefore, Applicants respectfully submit that independent claim 21 is patentable over Timmermans and Uchida.

For reasons similar, or somewhat similar, to those described above with regard to independent claim 21, independent claims 28-30 and 32-33 are also patentable.

C. Claims 34-46

Independent claim 34 is representative and recites, *inter alia*:

“An information recording apparatus for recording information on a predetermined recording medium . . .

wherein said creation means creates first data by which an image can be displayed over an entire screen, and second data for enhancing the image quality of said image displayed by said first data, each being used as said search data, and said recording means records said **first data sequentially followed on the recording medium by said second data**,

wherein the first data includes a first macro block of discrete cosine components extracted from a first luminance signal, a second macro block of discrete cosine components extracted from a first color-difference signal, and a third macro block of discrete cosine components extracted from a second color-difference signal, and

wherein the second data includes three macro blocks of discrete cosine components extracted from each of three luminance signals, wherein the three luminance signals and the first luminance signal are portions of a main luminance signal,

wherein a sync block of a sync block header of the recording medium includes macro blocks that correspond with the image displayed such that macro

blocks of the first data are mapped to the display image, left to right, from an X address of a start macro block and a Y address of the start macro block, and wherein the sync block header includes a picture class ID to indicate whether the search data is first data or second data.” (Emphasis added)

Applicants respectfully submit that nothing has been found in Timmermans or Uchida that would teach or suggest the above-identified features of claim 34. In addition to the features previously identified and argued above for independent claim 1, neither Timmermans nor Uchida, taken alone or in combination, teach or suggest that a sync block of a sync block header of the recording medium includes macro blocks that correspond with the image displayed such that macro blocks of the first data are mapped to the display image, left to right, from an X address of a start macro block and a Y address of the start macro block. Additionally, Timmermans and Uchida, taken alone or in combination, do not teach or suggest that the sync block header includes a picture class ID to indicate whether the search data is first data or second data, all as required by claim 34.

The cited portions of Uchida simply do not teach the above-identified features of the claimed invention. Uchida **can not** teach a picture class ID indicating whether the search data is first data or second data because Uchida simply does **not** classify search data into first data and second data, as argued previously for independent claim 1. Similarly, Uchida cannot teach a sync block header for mapping the macro blocks from the first data, because Uchida does not discriminate between first data and second data, as argued previously for independent claim 1.

Therefore, Applicants respectfully submit that independent claim 34 is patentable over Timmermans and Uchida.

For reasons similar, or somewhat similar, to those described above with regard to independent claim 34, independent claims 41-43 and 46 are also patentable.

III. DEPENDENT CLAIMS

The other claims are dependent from one of the claims discussed above, and are therefore patentable for at least the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

CONCLUSION

Claims 1-46 are in condition for allowance. In the event the Examiner disagrees with any of statements appearing above with respect to the disclosure in the cited reference, or references, it is respectfully requested that the Examiner specifically indicate those portions of the reference, or references, providing the basis for a contrary view.

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In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable and Applicants respectfully request early passage to issue of the present application.

Respectfully submitted,

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